

Figure 1 A

ATGGAGGTACAGTTAGGGCTAGGGAGGGTCTACCCCCGGCCGCGTCCAGACCTATCGA 60
M E V Q L G L G R U Y P R P P S K T Y R

GGAGCTTCCAGAACCTGTTCCAGAGTGTGCGCGAAGTGATCCAGAACCCGGGCCCCAGG 120
G A F Q N L F Q S V R E V I Q N P G P R

CACCTGAGGCCGTGAGCGCACCTCCCGGTGCCATTGAGCAGCAGCAGCAGCAG 180
H P E A V S A A P P G A H L Q Q Q Q Q Q Q

CAGCAGCAGCAGGAGACCAGTCCTCGGCAGCAGCAGCAGCAGCAGCAGGGTGACGATGGC 240
Q Q Q Q E T S P R Q Q Q Q Q Q Q G D D G

TCTCCCCAACGCGCAGAGCAGAGGCCAACAGGCTACCTGGCTCTGGATGAGAACAGCAG 300
S P Q A Q S R G P T G Y L A L D E E Q Q

CCTCCCCAACAGCGGTCAAGCCTCCAGGGCCATCCGGAGAGTGCCCTGCGTTCCAGAGCCT 360
P S Q Q R S A S K G H P E S A C V P E P

GGAGTGACTTCGGCCACCGGCAAGGGGCTGAGCAGCAGCAGCAGCAGCACCCACGGAGCG 420
G V T S A T G K G L Q Q Q Q P A P P D E

AATGACTCAGCTGCCCATCCACATTGTCAGTGGGCCCCACTTCCCGGGCTTAAAGT 480
N D S A A P S T L S L L G P T F P G L S

AGCTGTTCCACCGATCTTAAAGACATCCTGAGCGAGGCTGGAACCATGCAACTCCTTCAG 540
S C S T D L K D I L S E A G T M Q L L Q

CAGCAGCGGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG 600
Q Q R Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

CAGCAGGAGGTAGTATCAGAAGGTAGCAGCAGCGGGAGAGCAGGGAGGGCCGGGTGCT 660
Q Q E V U S E G S S S G R A R E A A G A

TCCACCTCCCAAGGACAGTTACCTAGGTGGCAGTTGACCATCTCGACAGCGCCAG 720
S T S S K D S Y L G G S S T I S D S A K

GAGTTGTGTAAGGCAGTGTGGTGTCCATGGGTTGGGTGTGGAGGCATTGGAACATCTG 780
E L C K A V S U S M G L G U E A L E H L

AGCCCTGGGAAACAGCTCGGGGGATTGTATGACGCCCCGCTCCGGAGGTCCACCC 840
S P G E Q L R G D C M Y A P L L G G P P

GCCGTACGTCCCTGCGCTCCGCTGGCCGAAATGCAAGGTTCTGCTGATGACGGCCCG 900
A V R P C A P L A E C K G S L L D D G P

Figure 1 B

GGCAAGGGCACCGAAGAAACTGCTGAATATTCCCTTCAAGGCAGGTTATGCGAAGGG 960
G K G T E E T A E Y S P F K A G Y A K G

TTGGATGGGGACAGCCTGGCTGTTGAGCAGCAGTGAAGCAGGGGCTCCGGAACACTT 1020
L D G D S L G C S S S S E A G G S G T L

GAGATGCCATCCACCCCTGTCCTTACAGTCTGGAGCACTAGATGAAGCGGCAGCTTAT 1080
E M P S T L S L Y K S G A L D E A A A Y

CAGAGTCGAGACTACTACAACTTTCCCTCTCCCTAGGCAGGCCGCTCCCCATCCACCA 1140
Q S R D Y Y N F P L S L G G P P P H P P

CCTCCCCATCCACACCCGCATCAAGCTGGAAAAACCCCTCTGGACTATGGCAGCGCCTGG 1200
P P H P H T R I K L E N P L D Y G S A W

GCAGGCTGCAGCGGCACAAATGCCGCTACGGGGATCTGGCGAGCCTGCACGGAGCGGGTGCA 1260
A A A A A Q C R Y G D L A S L H G A G A

GCAGGACCCAGCTCGGGCTCACCTCGGCACCCACCTCTTCTGGCACACTCTTC 1320
A G P S S G S P S A T T S S S W H T L F

ACAGCAGAAGAAGGCCAGCTGATGGGCCCTGGCGGGAGTGGAGGGCGGCAGTGCAAGGC 1380
T A E E G Q L Y G P C G G S G G G S A G

GACGGGGGATCTGTAGCCCCCTATGGCTACACTCGGCCACCTCAGGGATTGGCGGGTCAG 1440
D G G S V A P Y G Y T R P P Q G L A G Q

GAGGTGACTTCCCTCCACCTGATGTGTGGTATCCGGCGGTGTGGTGAGCAGAGTGCCC 1500
E G D F P P P D V W Y P G G U U S R U P

TTTCCAGTCCTAGTTGTGTCAGGAGATGGCTTGGATGGAGAGCTACTCCGG 1560
F P S P S C V K S E M G S W M E S Y S G

CCCTATGGGGACATGCCTGGAGACTGCCAGGGACCATGTTCTACCCATTGACTATTAC 1620
P Y G D M R L E T A R D H U L P I D Y Y

TTTCCACCTCAGAAGACCTGTCTGATCTGCCTGGATGAGGCTTCTGGCTGTCACTATGG 1680
F P P Q K T C L I C G D E A S G C H Y G

GCTCTCACTTGTGGAGCTGCAAGACTCTTCTTAAAGAGCCGCTGAAGGGAAACAGAG 1740
A L T C G S C K V F F K R A A E G K Q K

TACCTGTGTGCCAGAAGATGATTGATTCACATGATAAATTCCGAGGGAAAAATTGTCCA 1800
Y L C A S R N D C T I D K F R R K N C P

Figure 1 C

TCTTGTGCGCCTCCGGAAATGCTATGAAGCAGGGATGACTCTGGGAGGCCCGGAAGCTAAAG 1860
S C R L R K C Y E A G M T L G A R K L K

AAACTGGGGAACTGAAACTGCAAGAGGAAGGGAGGGCTTCCAAATGTCACCAAGCCCCACT 1920
K L G H L K L Q E E G E A S N V T S P T

GAGGAGCCAAACCCAGAAGCTGACGGTGTCAACACATTGAAAGGCTATGAGTGTCAAGCCCAC 1980
E E P T Q K L T V S H I E G Y E C Q P I

TTTCTGAAATGTCCTTGAAAGCCATCGAGCCAGGCCTGGTGTGCTGGACATGACAACAAAC 2040
F L N V L E A I E P G V U C A G H D N N

CAGCCCCGACTCCTTGCGAGCCTTGCTCTAGCCTTAATGAAATTGGGTGAAAGGCAGCTT 2100
Q P D S F A A L L S S L N E L G E R Q L

GTACATGTGGTCAGTGGGCCAAGGCCTTGCCTGGCTCTAGCCTTAATGAAATTGGGTGAAAGGCAGCTT 2160
V H V V K W A K A L P G F R N L H V D D

CAGATGGCAGTCATTCACTGGATGGGGCTCATGGTGTGCTGGCATGGCTGGCGA 2220
Q M A V I Q Y S W M G L M U F A M G W R

TCCTTCACCAATGTCAGTCCAGGATGCTCTACTTCGCCCTGACCTGGTTTCAATGAG 2280
S F T N V N S R M L Y F A P D L V F N E

TACCGCATGCACAAAGTCCCAGGATGTCAGGCCAGTGTGTCGAAATGAGGGCACCTCTCTCAA 2340
Y R M H K S R M Y S Q C V R M R H L S Q

GAATTTGGATGGCTCCAAATCACCCCGCAGGAATTGGTGCATGAAAGGCGCTGCTGCTA 2400
E F G W L Q I T P Q E F L C M K A L L L

TTCAGCATTATTCCAGTGGATGGCTGAAAAAAATCAAAATTTGATGAACTTCGAATG 2460
F S I I P V D G L K H Q K F F D E L R M

AACTACATCAAGGAACCTGATCGTATCATTGCTTGCAAGAGAAGAAATCCACATCCTGC 2520
N Y I K E L D R I I A C K R K N P T S C

TCAGGGCGCTTCTACCAAGCTCACCAAGCTCCTGGACTCTGTGCAACCTATTGCTGAGAG 2580
S R R F Y Q L T K L L D S U Q P I A R E

CTGCATCAGTTCACTTTGACCTGCTAAATCAAGTCCCACATGGTGAAGCGTGGACTTCCA 2640
L H Q F T F D L L I K S H M V S U D F P

GAATGATGGCAGAAATCATCTCCGTGCAAGTGCCCAAGATTCTTCTGGGAAAGTCAG 2700
E M M A E I I S V Q U P K I L S G K V K

Figure 1 D

TCTTGTGCGCCTCCGGAAATGCTATGAGCAGGGATGACTCTGGGAGGCCCGGAGCTAARG 1860
S C R L R K C Y E A G M T L G A R K L K

AAGCTGGGGAAATCTGAAACTGCAAGAGGAAGGGAGGGCTTCCAAATGTCACCCAGCCCCACT 1920
K L G N L K L Q E E G E A S N V T S P T

GAGGAGGCCAACCCAGAAGCTGACGGTGTACACACATTGAAGGCTATGAGTGTCAAGCCCATC 1980
E E P T Q K L T V S H I E G Y E C Q P I

TTTCTGAATGTCCTTGAGGCCATCGAGCCAGGCCTGGTGTGCTGGACATGACACACAC 2040
F L N V L E A I E P G U V C A G H D N N

CAGCCCCGACTCCTTGAGGCCATTGCTCTAGCCTTAATGAAATTGGGTGAAAGGCAGCTT 2100
Q P D S F A A L L S S L N E L G E R Q L

GTACATGTGGTCAGTGGCCAGGGCCTTGCCTGGCTCATGGTGTGCTGGACATGACACAC 2160
V H U V K W A K A L P G F R N L H V D D

CAGATGGCAGTCATTCACTCAGTACTCCTGGATGGGGCTCATGGTGTGCTGGACATGGC 2220
Q M A V I Q Y S W M G L M U F A M G W R

TCCTTCACCAATGTCAGTCCAGGATGCTCTACTCGCCCCCTGACCTGGTTTCAATGAG 2280
S F T N V N S R M L Y F A P D L U F N E

TACCGCATGCACAGTCCGGATGTACAGCCAGTGTGCTGGACATGGCACCTCTCTCAA 2340
Y R M H K S R M Y S Q C V R M R H L S Q

GAATTTGGATGGCTCCAAATCACCCCGCAGGAATTGGTGCATGAGGGCGCTGCTGCTA 2400
E F G W L Q I T P Q E F L C M K A L L L

TTCAGCATTATTCCAGTGGATGGCTGAAAAAAATCAAAATTTGATGAACTTCGAATG 2460
F S I I P V D G L K N Q K F F D E L R M

AACTACATCAGGGAACTTGATCGTATCATTGCTTGCAAGAGAAGAAATCCACATCCTGC 2520
N Y I K E L D R I I A C K R K N P T S C

TCAGGGCGCTTCTACCAAGCTCACCAAGCTGGACTCTGTGCACCTATTGCTCGAGAG 2580
S R R F Y Q L T K L L D S V Q P I A R E

CTGCATCAGTTCACTTTGACCTGCTAATCAAGTCCCACATGGTGAAGCGCTGGACTTCCA 2640
L H Q F T F D L L I K S H M V S U D F P

GAATGATGGCAGAAATCATCTCCGTGCAAGTGCCCAAGATTCTTCTGGGAAAGTCAG 2700
E M M A E I I S V Q U P K I L S G K U K

Figure 2 A

Canine	ATGGAGGTAC	AGTTAGGGCT	GGGGGGTC	TACCCCGGGC	CGCCGTCCAA	GACCTA	TGAA	60		
Human	ATGGAGGTGC	AGTTAGGGCT	GGGGGGTC	TACCCCGGGC	CGCCGTCCAA	GACCTA	CCGA	60		
Canine	GGAGCTTCC	AGAA	CTGTT	CCAGAGCTGTG	CGCGAAGTGA	TCCAGAACCC	GGGGCCCCAGG	120		
Human	GGAGCTTCC	AGAA	CTGTT	CCAGAGCTGTG	CGCGAAGTGA	TCCAGAACCC	GGGGCCCCAGG	120		
Canine	CA	CCCC	GAGG	CCG	GAGCGC	AGCACCTCCC	GGTGCCATT	-----	161	
Human	CA	CCCC	GAGG	CCG	GAGCGC	AGCACCTCCC	GGTGCCATT	TGCTGCTGCT	GCAGCAGCAG	180
Canine	-----	-----	GCAGCAGCA	GCAGCAGCA	CAGCAGCAGC	AGGAGACCTAG	TCCCTCGGAG	-----	210	
Human	CAGCAGCAGC	AGCAGCAGCA	GCAGCAGCA	CAGCAGCAGC	AGGAGACCTAG	AGGAGACTAG	CCCCAG-----G	-----	237	
Canine	CAGCAGCAGC	AGCAGCAGGG	TGACCGATGG	GG	TCTCCCCAAG	CGCAGAGCAG	AGGGCCCCAC	-----	270	
Human	CAGCAGCAGC	AGCAGCAGGG	TGAGGGATGG	GG	TCTCCCCAAG	CCCACCGTAG	AGGGCCCCAC	-----	297	
Canine	GGCTACCTGG	CTCTGGATGA	GGACACAGCG	GG	CCTTCACAC	AGCGGGTCAGC	CTCCAGGGGC	-----	330	
Human	GGCTACCTGG	TCCTGGATGA	GGACACAGCA	GG	CCTTCACAC	CGCAGTCGGC	CCTGGAGTGC	-----	357	
Canine	CAT	CCCCGGAGA	GTGCGCTGCGT	CCAGAGCCT	GGAGTGACATT	CGGCCACCGG	CAAGGGGGCTG	-----	390	
Human	CAC	CCCCGGAGA	GAGGTTGCGT	CCAGAGCCT	GGAGCCCCGG	TGGCCGCCAG	CAAGGGGGCTG	-----	417	
Canine	CAGCAGCAGC	AGCAGCAGCC	ACCGGACGAG	ATGACTCTAG	CTGGCCCCATC	CACATTGTCA	-----	450		
Human	CCGCAAGCAGC	TGCGCAGCAGC	TCCGGACGAG	ATGACTCTAG	CTGGCCCCATC	CACGTTGTCC	-----	477		
Canine	CTGCTGGGCC	CCACTTTCCC	GGGCTTAAGT	AGCTGTTCCA	CGATCTTAA	AGACATCCTG	-----	510		
Human	CTGCTGGGCC	CCACTTTCCC	GGGCTTAAGC	AGCTGCTCCG	CTGACCTTAA	AGACATCCTG	-----	537		
Canine	AGCGAGGGCTG	GAACCATGCA	ACTCCTTCAG	CAGCAGCGGC	AGCAGCAGCA	GCAGCAGCAG	-----	570		
Human	AGCGAGGGCA	GAACCATGCA	ACTCCTTCAG	CAGCAGCGC	AG	-----	-----	579		
Canine	CAACAGCAAC	AGCAGCAGCA	GCAGCAGCAA	CAGCAGGAGG	TAGTATCAGA	AGG	TAGCAGC	630		
Human	-----	-----	-----	GAAG	CACTATCCGA	AGG	AGCAGCAGC	603		
Canine	AGCGGGAGAG	CAAGGGAGGC	CCGGGGTGCT	CCACCTCTCT	CCAGGGACAG	TTACCTAGGT	-----	690		
Human	AGCGGGAGAG	CAAGGGAGGC	CTCGGGGGCT	CCCACCTCTCT	CCAGGGACAA	TTACCTAGGG	-----	663		
Canine	GGCAGTTCGA	CCATCTCGGA	CAACGCCAAG	GAAGTTGTGA	AGGCAGTGTC	GGTGTCCATG	-----	750		
Human	GGCAC	TTTCGA	CCATTTCTGA	CAACGCCAAG	GAAGTTGTGA	AGGCAGTGTC	GGTGTCCATG	723		
Canine	GGTTTGGGTG	TGGAGGCATT	GGACATCTG	AGCCCTGGGG	AAACAGCTTCG	GGGGGGATTGT	-----	810		
Human	GGCCTGGGTG	TGGAGGCATT	GGACATCTG	AGTCCAGGGG	AAACAGCTTCG	GGGGGGATTGC	-----	783		

Figure 2 B

Canine	ATGTA	CGCCC	CG	CT	TGGG	AGG	TCCACCC	GGCG	TACG	TC	TG	CGCT	CCGCTG	864				
Human	ATGTA	CGCCC	CA	CT	TGGG	AGT	TCCACCC	GCT	TGCGTC	CC	CT	TG	CCCA	TTTG	843			
Canine	GGCGA	ATGCA	AA	GG	TTCTCT	GCT	GGATGAC	GG	CCGGG	GA	AGG	GCAC	CGA	AGA	ACTGCT	924		
Human	GGCGA	ATGCA	AA	GG	TTCTCT	GCT	AGAGACGAC	AGC	GCAGGCA	AG	AGG	GCAC	CGA	AGA	ACTGCT	903		
Canine	GA	ATTTCCC	CT	TTCA	AGGG	AG	GTATGCG	AA	AGGGT	TGG	AT	GGG	GA	CG	CCTGGGCTGT	984		
Human	GA	ATTTCCC	CT	TTCA	AGGG	AG	GTATCACCC	AA	AGGGT	TAG	AGG	GGAGAG	CCT	AGGGCTGC	963			
Canine	TC	GGCAGCA	G	TG	GA	GCAGG	GG	GC	CT	TTGAGA	TA	CC	AT	CC	CCTGTCTCTT	1044		
Human	TC	GGCAGCA	G	TG	GA	GCAGG	GG	GC	CT	TTGAGA	TA	CC	GT	CT	CCTGTCTCTC	1023		
Canine	TAC	AGTC	T	G	AGCA	TG	AG	GG	CA	TATCAA	G	TC	GA	GACTA	CTAC	1104		
Human	TAC	AGTC	T	G	AGCA	TG	AG	GG	CA	TGCTAC	G	TC	GC	GACTA	CTAC	1083		
Canine	CC	CTCT	C	CC	TAGG	CC	CC	CT	CC	CC	CC	CC	CC	CC	CC	1164		
Human	CC	CTCT	C	CC	TAGG	CC	CC	CT	CC	CC	CC	CC	CC	CC	CC	1143		
Canine	RA	GCTGG	AA	AC	CC	T	CT	GG	AG	GC	GC	CT	GG	GC	GC	1224		
Human	RA	GCTGG	AA	AC	CC	T	CT	AG	GC	GC	CT	GG	GC	GC	GC	1203		
Canine	TA	GGGG	AC	TG	GG	GA	GC	GG	CT	GG	GA	GC	GG	CT	GG	1284		
Human	TA	GGGG	AC	TG	GG	GA	GC	GG	CT	GG	GA	GC	GG	CT	GG	1263		
Canine	TC	GGCC	CCA	CC	T	CT	GG	CA	CT	CT	TT	CA	CG	AG	TGTAT	1344		
Human	TC	GGCC	CCA	CC	T	CT	GG	CA	CT	CT	TT	CA	CG	AG	TGTAT	1323		
Canine	GG	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1356			
Human	GG	ACCGT	GTG	GT	GG	GT	GG	GT	GG	GT	GG	GT	GG	GT	GG	1383		
Canine	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	1410		
Human	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	1443		
Canine	ACT	CGGG	CC	CT	CA	GG	GG	GG	AT	CT	GT	GG	CC	CC	CT	1470		
Human	ACT	CGGG	CC	CT	CA	GG	GG	GG	AT	CT	GT	GG	CC	CC	CT	1503		
Canine	TAT	CCC	GGG	G	G	TG	GG	GT	GG	CC	T	TG	GT	GT	GT	1530		
Human	TAT	CCC	GGG	G	G	TG	GG	GT	GG	CC	T	TG	GT	GT	GT	1563		
Canine	AT	GGG	CT	CT	T	GG	GG	AG	AG	CT	AC	GG	GG	TT	GG	AG	ACTGCC	1590
Human	AT	GGG	CC	CC	T	GG	GG	AG	AG	CT	AC	GG	GG	TT	GG	AG	ACTGCC	1623

Figure 2 C

Canine	AGGGACCATG	TTC	TC	CCCAT	TGACTATTAC	TTTCCACCC	T	AGAAGACCTG	TCTGATCTGC	1650				
Human	AGGGACCATG	TTT	TG	CCCAT	TGACTATTAC	TTTCCACCC	C	AGAAGACCTG	CCTGATCTGT	1683				
Canine	GGT	GATGAGG	CTT	CTGG	TG	TCACTATGGA	GCTCTCAC	T	GTGGGAGCTG	CAA	GTCTTC	1710		
Human	GGAG	GATGAGG	CTT	CTGG	TG	TCACTATGGA	GCTCTCAC	T	GTGGGAGCTG	CAA	GGTCTTC	1743		
Canine	TTT	AAA	AGAG	CCG	CTG	AGG	GA	ACAG	AGAAA	TG	ATTG	TAC	1770	
Human	TTT	AAA	AGAG	CCG	CTG	AGG	GA	ACAG	AGAAA	TG	ATTG	CACT	1803	
Canine	ATC	GAT	AAAT	TCC	GAG	GG	AA	TTT	GATG	CA	TATG	AGCA	1830	
Human	ATT	GAT	AAAT	TCC	GAG	GG	AA	TTT	GATG	CA	TATG	AGCA	1863	
Canine	GGG	ATG	ACTC	TGG	GAG	CCCG	GA	AGCT	GGG	AA	CT	AGG	1890	
Human	GGG	ATG	ACTC	TGG	GAG	CCCG	GA	AGCT	GGG	AA	AC	GGG	1923	
Canine	GGAG	AGG	GCTT	CC	ATG	TGAC	CA	AGCCC	CACT	GA	CG	GTGTCA	1950	
Human	GGAG	AGG	GCTT	CC	ATG	TGAC	CA	AGCCC	CACT	GA	CG	GTGTCA	1983	
Canine	CAC	ATT	GAAG	G	CT	ATG	TG	TCA	GCCC	ATC	TC	GAGCCA	2010	
Human	CAC	ATT	GAAG	G	CT	ATG	TG	TCA	GCCC	ATC	TC	GAGCCA	2043	
Canine	GGC	GT	GGT	GT	G	TG	TG	GA	ACAC	CA	CT	TGCTCTCT	2070	
Human	GGT	GT	GGT	GT	G	TG	TG	GA	ACAC	CA	CT	TGCTCTCT	2103	
Canine	AGC	CT	TAATG	AA	T	GGG	TG	AG	CA	GTG	TG	GGGC	2130	
Human	AGC	CT	TAATG	AA	T	GGG	TG	AG	CA	GTG	TG	GGGC	2163	
Canine	CCGG	GCT	TCC	GC	AA	CTG	GG	ATG	GCG	AG	TC	CTGGATG	2190	
Human	CCT	GGG	GCT	TCC	GC	AA	CTG	GG	ATG	GCG	AG	TC	CTGGATG	2223
Canine	GGG	GCT	CAT	GG	T	TTT	GGCC	AT	GCT	ACTC	C	GGGATGCTC	2250	
Human	GGG	GCT	CAT	GG	T	TTT	GGCC	AT	GCT	ACTC	C	GGGATGCTC	2283	
Canine	TAC	TT	CG	CCC	C	TG	AC	GG	ATG	TG	ATG	TACAGC	2310	
Human	TAC	TT	CG	CCC	C	TG	AC	GG	ATG	TG	ATG	TACAGC	2343	
Canine	CAG	TG	TG	TG	CC	CT	CT	CA	GA	TT	GG	ATGCTC	2370	
Human	CAG	TG	TG	TG	CC	CT	CT	CA	GA	TT	GG	ATGCTC	2403	
Canine	GA	AT	TT	TT	TG	TG	GT	G	CTG	CTG	TG	GGGCTGAA	2430	
Human	GA	AT	TT	TT	TG	TG	GT	G	CTG	CTG	TG	GGGCTGAA	2463	

Figure 2 D

Canine	RATCAAAAT TCTTTGATGA ACTTCGAATG AACTACATCA AGGAACTTGA TCGTATCATT	2490
Human	RATCAAAAT TCTTTGATGA ACTTCGAATG AACTACATCA AGGAACTCGA TCGTATCATT	2523
Canine	GCCTTGCAAGA GAAAAAATCC CACATCCTGC TCAAGCGCT TCTACCAAGCT CACCAAGCTC	2550
Human	GCATGCAAGA GAAAAAATCC CACATCCTGC TCAAGCGCT TCTACCAAGCT CACCAAGCTC	2583
Canine	CTGGACTCTG TGCAAGCTAT TGCTCGAGAG CTGCATCACT TCACTTTTGA CCTGCTAATC	2610
Human	CTGGACTCCG TGCAAGCTAT TGCGAGAGAG CTGCATCACT TCACTTTTGA CCTGCTAATC	2643
Canine	AAAGTCCCACCA TGGTGGCCGT GGACTTTCCA GAAATGATGG CAGAGATCAT CTCTGTGCAA	2670
Human	AAAGTCACACCA TGGTGGCCGT GGACTTTCCG GAAATGATGG CAGAGATCAT CTCTGTGCAA	2703
Canine	GTGCCCAAGA TTCTTTCTGG GAAAGTCAGG CCCATCTATT TCCACACGCA GTGA	2724
Human	GTGCCCAAGA TCTCTTCTGG GAAAGTCAGG CCCATCTATT TCCACACGCA GTGA	2757

Figure 3 A

Canine	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GAHL	--QQQ	57
Human	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	LLQQQ	60
Chimpanzee	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	LLQQQ	60
Macaque	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	--	54
Lemur	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	--	54
Rat	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	--	54
Mouse	MEVQLGLGRV YPRPPSKTYR GAFQNLFQSU REI	IQNPGPGR HPEAASAPP GASL	--	54
Canine	QQQQQQQQE-- ----T---SP RQQQQQ-QDG	EDGSPQAQSR	GPTGYLALDE EQQPSQDQSA	107
Human	QQQQQQQQQQQ QQQE---TS PRQQQQ-QDG	EDGSPQAHR	GPTGYLALDE EQQPSQDQSA	116
Chimpanzee	QQQQQQQQQQQ QQQQQQQQET SPRQQQ-QDG	EDGSPQAHR	GPTGYLALDE EQQPSQDQSA	119
Macaque	-----QQ QQQQQQETSP RQQQQQ-QDG	EDGSPQAHR	GPTGYLALDE EQQPSQDQSA	105
Lemur	----- QQQE---TS PPQQQQQQDG	EDGSPQAQSR	GPTGYLALDE EQQPSQDQSA	101
Rat	----- QQRQE---TS PRRRRRQOHP	EDGSPQAHR	GPTGYLALDE EQQPSQDQSA	101
Mouse	----- QQRQE---TS PRRRRRQOHT	EDGSPQAHR	GPTGYLALDE EQQPSQDQSA	101
Canine	SKGHPESSACU PEPGIVTSATG	KGLQQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	167
Human	LECHPERGCU PEPGIAAVAPAS	KGLPQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	176
Chimpanzee	PECHPERGCU PEPGIAAVAPAS	KGLPQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	179
Macaque	PECHPERGCU PEPGIAAVAPG	KGLPQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	165
Lemur	LECHPESSGCN PEPGIAAVAPAS	KGLQQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	161
Rat	SEGHPESSGCL PEPGIAATAPG	KGLPQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	161
Mouse	SEGHPESSCL PEPGIAATAPG	KGLPQQPPAP	PDEEDOSAAPS TLSLLGPTFP GLSSCSADIK	161
Canine	DILSEAGTMQ LLQQQRQQQQ	QQQQQQQQQQ	QQQQQEAVUSE GSSSGRAREA AGA6TSSKDS	227
Human	DILSEAGTMQ LL-----	-----	QQQQQEAVUSE GSSSGRAREA SGAPTSSKDN	218
Chimpanzee	DILSEAGTMQ LLQQQQQE--	-----	-----AVUSE GSSSGRAREA SGAPTSSKDN	221
Macaque	DILSEAGTMQ LL-----	-----	QQQQQEAVUSE GSSSGRAREA SGAPTSSKDN	207
Lemur	DILSEAGTMQ LL-----	-----	QQQQQEAVUSE GSSSGRAREA AGAPTSSKDS	203
Rat	DILSEAGTMQ LLQQQQQQ--	QQQQQQQQQQ	QQQQQEAVISE GSSSGRAREA TGAP9SSKDS	219
Mouse	DILSEAGTMQ LLQQQQQQQQ	HQQQHQHQHQ	QQE---VISE GSSSGRAREA TGAP9SSKDS	217
Canine	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYAPULLG GPPAUR--PC	285
Human	YLGGGSTISD NAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYAPULLG UPPAURPTPC	278
Chimpanzee	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYAPULLG UPPAURPTPC	281
Macaque	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYAPULLG UPPAURPTPC	267
Lemur	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYAPULLG GPPAURPTPC	263
Rat	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYASULLG GPPAURPTPC	279
Mouse	YLGGGSTISD SAKELCKAVS USMGLGVEAL	EHLSPGEQLR	GDCMYASULLG GPPAURPTPC	277
Canine	APLRECKGSL LDDGPKGTE ETAEYSPFKA	GYAKGLLEGES	LGCSSSSEAG SSGTLELPST	345
Human	APLRECKGSL LDDSACKSTE DTAEYSPFKG	GYTKGLEGES	LGCSSSSEAG SSGTLELPST	338
Chimpanzee	APLRECKGSL LDDSACKSTE DTAEYSPFKG	GYTKGLEGES	LGCSSSSEAG SSGTLELPST	341
Macaque	APLRECKGSL LDDSACKSTE DTAEYSPFKG	GYTKGLEGES	LGCSSSSEAG SSGTLELPST	327
Lemur	APLRECKGSL LDDSADKGTE EPAREYTPFKG	SYTQGLEGES	LGCSSSSEAG SSGTLELPST	323
Rat	APLRECKGSL LDEGPKGTE ETAEYSSFKG	GYAKGLLEGES	LGCSSSSEAG SSGTLEIPSS	339
Mouse	APLRECKGLP LDEGPKGTE ETAEYSSFKG	GYAKGLLEGES	LGCSSSSEAG SSGTLEIPSS	337

Figure 3 B

Canine	LSLYKSGALD	EARAYQOSRDY	YNFPPLSLGG	-PPPIPPPPH	PHTRIKLENP	DYGSWARRA	403
Human	LSLYKSGALD	EARAYQOSRDY	YNFPPLSLAG	-PPPPPPPPH	PHARIKLENP	DYGSWARRA	396
Chimpanzee	LSLYKSGALD	EARAYQOSRDY	YNFPPLSLAGP	PPPPPPPPH	ARIKL--ENP	DYGSWARRA	399
Macaque	LSLYKSGALD	EARAYQOSRDY	YNFPPLSLAGP	PPPPPPPPH	ARIKL--ENP	DYGSWARRA	385
Lemur	LSLYKSGALE	EARASYQOSRDY	YNFPPLSLAGP	PPPPPLPPPH	ARIKL--ENP	DYGSWARRA	381
Rat	LSLYKSGAID	EARAYQONRDY	YNFPPLSLSGP	PHPPPPPTPH	ARIKL--ENP	SDYGSWARRA	397
Mouse	LSLYKSGALD	EARAYQONRDY	YNFPPLSLSGP	PHPPPPPTPH	ARIKL--ENP	DYGSWARRA	395
Canine	RAQCRMGDLA	SLHGAGAGAGP	SSGSPSPATT	SSWHTLFTAE	EGQLYGPGCGG	SGGGSAGDGG	463
Human	RAQCRMGDLA	SLHGAGAGAGP	SSGSPSPARRA	SSWHTLFTAE	EGQLYGPGCGG	GGGGGGGGGGG	456
Chimpanzee	RAQCRMGDLA	SLHGAGAGAGP	SSGSPSPARRA	SSWHTLFTAE	EGQLYGPG--	-----GG	449
Macaque	RAQCRMGDLA	SLHGAGAGAGP	SSGSPSPARRA	SSWHTLFTAE	EGQLYGPG--	-----G	434
Lemur	RAQCRMGDLA	SLHGAGAGATGP	SSGSPSPARRA	SSWHTLFTAE	EGQLYGPG--	-----G	430
Rat	RAQCRMGDLA	SLHGGSURGP	STGSPSPATT	SSWHTLFTAE	EGQLYGPG--	-----G	445
Mouse	RAQCRMGDLG	SLHGGSURGP	STGSPSPATT	SSWHTLFTAE	EGQLYGPG--	-----G	443
Canine	-----	-----	-----	-----	-----	-----	505
Human	GGGGGGGGGG	GGGGGERA	APYGVTRPPQ	GLAQEGDFP	PPQWYWPGGU	USRUPFSPS	516
Chimpanzee	GGGGGGGGGG	GGGGGERA	APYGVTRPPQ	GLAQEGDFT	APQWYWPGGU	USRUPMPSP	509
Macaque	-GGGGGGGGGG	GGGAGE	APYGVTRPPQ	GLAQEGDFT	APQWYWPGGM	USRUPMPSP	493
Lemur	-GGGGG----	--TSEAGA	TPYGVTRPPQ	GLAQEGDFP	APQWYWPGGU	USRUPMPSPS	482
Rat	-GGGGS----	-SSPSDAGP	APYGVTRPPQ	GLASQEGDFS	ASEWYWPGGU	UNRUPMPSPS	499
Mouse	-GGGGS----	-SSPSDAGP	APYGVTRPPQ	GLTSQESDYS	ASEWYWPGGU	UNRUPMPSPN	497
Canine	CUKSEMGSWM	ESYSGPYGDM	RLETARDHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	565
Human	CUKSEMGPWM	D9YSGPYGDM	RLETARDHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	576
Chimpanzee	CUKSEMGPWM	D9YSGPYGDM	RLETARDHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	569
Macaque	CUKSEMGPWM	D9YSGPYGDM	RLETARDHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	553
Lemur	CUKSEMGPWM	ESYSGPYGDM	RLETARDHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	542
Rat	CUKSEMGPUM	ENYSGPYGDM	RLOSTADHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	559
Mouse	CUKSEMGPUM	ENYSGPYGDM	RLOSTADHUL	PIDYYFPQQK	TCLICGDEAS	GCHYGALTG	557
Canine	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	625
Human	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	636
Chimpanzee	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	629
Macaque	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	613
Lemur	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	602
Rat	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	619
Mouse	SCKUFFKRAA	EGKQKYLCA	RNDCTIDKFR	RKNCPSCRLR	KCYERGMTLG	ARKLKKLGNL	617
Canine	KLQEEGEFSN	UTSPTEEPTQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	685
Human	KLQEEGEFSS	TTSPTEETTQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	696
Chimpanzee	KLQEEGEFSS	TTSPTEETTQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	689
Macaque	KLQEEGEFSS	TTSPTEETTQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	673
Lemur	KLQEEGEFSS	ATSPTEESSQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	662
Rat	KLQEEGENSS	AGSPTEDPSQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	679
Mouse	KLQEEGENSS	AGSPTEDPSQ	KLTUSHIEGY	ECQPIFLNVL	EATIEPGUVCA	GHDNNQPDOSF	677

Figure 3 C

Canine	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	745
Human	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	756
Chimpanzee	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	749
Macaque	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	733
Lemur	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	722
Rat	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	739
Mouse	AALLSSLNEL GERQLVHUUK WAKALPGFRN LHUUDDQMAVI QYSWMGLMVF AMGWR5FTNU	737
Canine	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	805
Human	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	816
Chimpanzee	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	809
Macaque	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	793
Lemur	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	782
Rat	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	799
Mouse	NSRMLYFAPD LUFNEYRMHK SRMYSQCURM RHLSQEFGWL QITPQEFLCM KALLLFSIIP	797
Canine	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	865
Human	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	876
Chimpanzee	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	869
Macaque	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	853
Lemur	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	842
Rat	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	859
Mouse	UDGLKNQKFF DELRMNYIKE LDRIIACKRK NPTSCSRRFY QLTKLDSUQ PIARELHQFT	857
Canine	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	907
Human	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	918
Chimpanzee	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	911
Macaque	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	895
Lemur	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	884
Rat	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	901
Mouse	FDLLIKSHMU SVDFPEMMAE IISVQUPKIL SGKVKP1YFH TQ	899